50. Mapping Plastic Pollution in the Mediterranean Ionic Sea: Citizen Science Monitoring Experiences and Results from Amendolara

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Coastal ecosystems are increasingly threatened by anthropogenic pressures, particularly plastic pollution, which represents one of the most pervasive environmental challenges affecting Mediterranean marine environments. Monitoring coastal litter is essential for understanding pollution dynamics and supporting sustainable management strategies; however, conventional monitoring activities often require significant economic and technical resources. In this context, citizen science approaches provide accessible and participatory tools for long-term environmental observation while promoting local environmental awareness and stakeholder engagement. This study presents the experiences and preliminary results of a citizen science-based beach litter monitoring program conducted in Amendolara, a small coastal urban center located on the Ionian coast of Southern Italy, characterized by tourism activities, fishing communities, and proximity to the Amendolara Bank. The territory is also subject to long-term marine ecosystem monitoring activities carried out by the Stazione Zoologica Anton Dohrn. In collaboration with MOC-LLAB, the project developed and implemented simplified citizen science protocols to assess the presence and distribution of coastal plastic litter in a focal monitoring site along the Amendolara coastline. Data collection activities were conducted over a two-year period using the QField© mobile interface, which allowed participants to record and georeference beach litter observations through standardized digital protocols. The collected data were subsequently organized into georeferenced maps to visualize spatial distribution patterns and compare temporal variations between the two monitoring periods. The study particularly focuses on evaluating trends in coastal pollution, identifying the most recurrent litter categories, and assessing the effectiveness of citizen science methodologies for generating reliable environmental information at the local scale. 2 D. Vito . S. Scovazza , C. Maione, C. Giommi and T. Romeo Preliminary results indicate a significant presence of plastic waste in anthropized coastal areas, with seasonal variations likely associated with tourism pressures, marine currents, and local human activities. The comparison between the two annual datasets highlights the potential of participatory monitoring to support long-term coastal observation and contribute to environmental management strategies. It also enables the collection of useful data to understand the evolution of plastic pollution over time, to identify major sources of waste and to support research and policy decision-making. The study demonstrates how citizen science protocols can provide low-cost and scalable tools for marine litter monitoring while strengthening environmental education, community participation, and local awareness regarding coastal ecosystem conservation.